General Format: This proposal is to be typed, 12-point font, Times Roman, Calibri, or similar, and printed one-sided, DOUBLE SPACED, TWO COPIES. Number all pages. Label and number your response to each task as labeled and numbered in the instructions. Grammar and spelling count, too. Use complete sentences. Proofread.

Written Final Report Table of Contents

Cover Page: Be sure each team member’s name is on the cover page, typed and signed. Indicate which member is the team leader. Give the project a title.

Sign the following statement (or a photocopy of it) and include it on the cover page of your final report:

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ORIGINAL WORK STATEMENT - FINAL REPORT

Project Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*We, the undersigned, certify that we did gather, in the manner we have described, the data analyzed in this report. We also certify that the actual composition of this report and the associated computer work were done by us and are original and authentic work.*

Signatures Typed Names Email or Phone Contact

Team

Leader: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Page 1: Part I: Executive Summary

Page 2 on: Part II: Statistical Summary

Appendices: (Label and number your appendices, as appropriate, and refer to them by number as you write about them.)

**(40 points) Part I: Executive Summary**

This is a report to an effective, intelligent manager who has NOT taken a statistics course. Thus, do not use terms like simple random sample, hypothesis test, or confidence interval.

Prepare a summary (ONE PAGE OR LESS) of your project and its findings for a person in charge of the population you studied, answering the following questions, in numbered paragraphs.

(5 points) 1. What question(s) did you study?

(10 points) 2. How did you study it? (Briefly describe your sampling and measurement

processes.

(15 points) 3. What are your major findings? (Report some descriptive statistics here.

Also report in business English the results of confidence intervals you computed or hypothesis tests you conducted.) How do your findings compare to what you expected to find?

(10 points) 4. What action(s) do you recommend that your client take on the basis of

your study and its findings? Or, what are your recommendations for further study of your topic?

**(110 points) Part II: Statistical Summary**

This is a report to your statistician supervisor who has taken STA 2023. (Be concise. No specific page limit.)

(3 points) 1. What was your target population? Did your actual population differ from it? How?

(3 points) 2. What variables were studied?

(3 points) 3. Describe with matrix terminology the size of the actual population of values (if the

entire population had been measured on all your variables.)

(3 points) 4. What were the parameters of interest?

(3 points) 5. Describe your sampling process.

(3 points) 6. Describe your sample of individuals.

(3 points) 7. Describe your measurement process. Include a copy of your script and actual

questionnaire if you gathered data using interviews.

(6 points) 8. Present a computer-printed copy of your complete sample of values in an appendix

in the order gathered. Email me an attached Minitab (preferably) or Excel spreadsheet of your data.

(24 points) 9. Present your data analyses, calculations of inferential statistics (show your work),

graphs, and figures.

(8) A. Present numerical descriptive statistics (center and variation) for all variables measured.

(8) B. Present at least two computer-drawn graphs.

(8) C. Present at least two hypothesis tests or two confidence intervals or one of each, done using statistics software. (Show your computer output and the commands that produced the output. Present hand-calculations that verify one of the computer-produced hypothesis tests or confidence intervals.)

(24 points) 10. Present your findings.

(4) A. Present interpretations of your reported numerical, descriptive statistics from 9A, in sentence form, in the context of the data.

(4) B. Present interpretations of your graphs from 9B, in sentence form, in the context of the data.

(8) C. Using technical statistical terminology, state the generalizations you can make from your sample. This is an interpretation of your inferential statistics from 9C.)

(8) D. What limitations are there on these generalizations? This is a discussion of any compromises to the sampling and measurement processes. Discuss anything that was a compromise to random sampling, nonresponse rate, unbiased measurement, etc. and the impact these have on your inferences and conclusions.

(4 points) 11. Suppose that at some time in the future you confront a question similar to the one that motivated your project topic. What have you learned from this project that will influence your approach to the future question?

(4 points) 12. Present a final budget for the term project summarizing all time and money expenditures on the project per team member. Indicate how accurate you think the data are. Include a copy of the estimated budget from the proposal. Compare the actual expenditures of time, money, and other resources to those estimated in the proposal. Present your thoughts on the sources of any discrepancies.

(4 points) 13. Complete self-assessments of the final report. This task is a chance for you to

assess your own work (both statistically and as teammates). Say something about how you think you have done on the written final report, part by part if you feel a need or just overall. Also say something about how the team has worked out. Be sure you express the feelings and thoughts of everyone participating. You may do this individually, with each team member submitting their part.

(3 points) 14. Consider all assignments that have been part of this project: The Team Working Agreement, Potential Topics Assignment, Written Proposal, Final Report. Give me specific feedback as to what project questions or tasks need more statistical content support and what kind of support is needed.

(20 points) 15. Oral Report: To earn credit for the oral presentation of the final report, a team member must present part of it. The purpose of this report is to practice and improve the process of communicating technical material, both speaking (the presenter) and listening (the audience). This gives you an opportunity to critique your speaking and listening skills and to be critiqued.

Suppose your instructor is your supervisor and the class is a committee of company executives that he or she has gathered together to hear your final report and to decide whether to (1) take actions you are recommending and (2) fund additional work by your team.

Assume your audience knows statistics at the level discussed to date in STA 2023. Some are experts in your subject area; others are not. Your oral presentation communicates your competency to the committee members and heavily influences their decisions. They probably will not read your entire written report. Your oral presentation will also influence your supervisor’s attitudes and expectations as he or she examines and evaluates your written final report. Your team will have SIX MINUTES to present its final report.

Answer the following questions:

1. What question associated with what business or population did you study?

2. How did you study it?

3. What are your findings? Explain in business English what you learned from your confidence intervals and hypothesis tests. How do they compare to what you predicted you would find? Comment on any differences seen.

4. What action(s) do you recommend on the basis of your study and its findings?